

S210457



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2244-116
Job Sheet 195425



Part No: D2244-116

Job Qty: 86 pcs

Part Name: Step Extrusion



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 5/22/19

Job Tracking No:

Due Date: 7/2/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV D1

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	86 pcs	7/2/19	7/2/19	0.00	0.00	Purchasing - 1		
							Purchasing - 2		AT 19/08/30
							Purchasing - 3		
110	Packaging 2-1 - Receive - B4B	86 pcs	7/2/19	7/2/19	0.00	0.00	Packaging 2 - 1 - B4B		
							Packaging 2 - 2 - B4B		
							Packaging 2 - 3 - B4B		
							Packaging 2 - 5 - B4B		
							Packaging 2 - 4 - B4B		
							Packaging 2 - 6 - B4B		
							Packaging 2 - 7 - B4B		
							Packaging 2 - 8 - B4B		
							Packaging 2 - 9 - B4B		
							Packaging 2 - 10 - B4B		
							Packaging 2 - 11 - B4B		
							Packaging 2 - 12 - B4B		
							Packaging 2 - 13 - B4B		
							Packaging 2 - 14 - B4B		
							Packaging 2 - 15 - B4B		
							Packaging 2 - 16 - B4B		
							Packaging 2 - 17 - B4B		
							Packaging 2 - 18 - B4B		
							Packaging 2 - 19 - B4B		
							Packaging 2 - 20 - B4B		
							Packaging 2 - 21 - B4B		
							Packaging 2 - 22 - B4B		
							Packaging 2 - 23 - B4B		
							Packaging 2 - 24 - B4B		
							Packaging 2 - 25 - B4B		
							Packaging 2 - 26 - B4B		
							Packaging 2 - 27 - B4B		
							Packaging 2 - 28 - B4B		AT 19/08/30



Container No: S210457



Part: D2244-116

Job No: 195425

Serial No/Batch: S210457

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 06/30/19

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				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
120	QC 6	86 pcs	7/2/19	0.00 0.00	QC 6 - 9
					QC 6 - 68
					QC 6 - 61
					QC 6 - 40
130	Packaging 3-1 - Stock - B4B	86 pcs	7/2/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
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					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
140	QC 21 - SA	86 pcs	7/2/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 53

DAS
61
9-89

See

21

20

AUG 30 2019

Part Op 100 - (Purchasing) Issue P/O: _____ a) Extrude as per Dwg D2244 b) Material: 6061-T6 (QQ-A-200/8) c) Descriptions: Minimum yield tensile strength = 35 ksi d) Minimum ultimate tensile strength = 38 ksi e) Minimum elongation = 8% f) Order at 116" long g) Caradon Indalex Tool # MH-18865 h) Material cert's is required ***EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** ***MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE***

110 - (Receive & Inspect for Damage & Mat'l Certs) Ensure certification are attached

120 - (QC6- All purchased or subcontracted products) Check Pull test per Dwg D2244 for compliance page attached. Check hardness with Webster tester

130 - Packaging3 (Identify as per dwg & Stock Location: _____) LOCATION : WA003
140 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2244-116P	Step Extrusion	86 pcs (1 ea)	100-Purchasing	5210456

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D2244-116P	86	0	0

Part Specifications

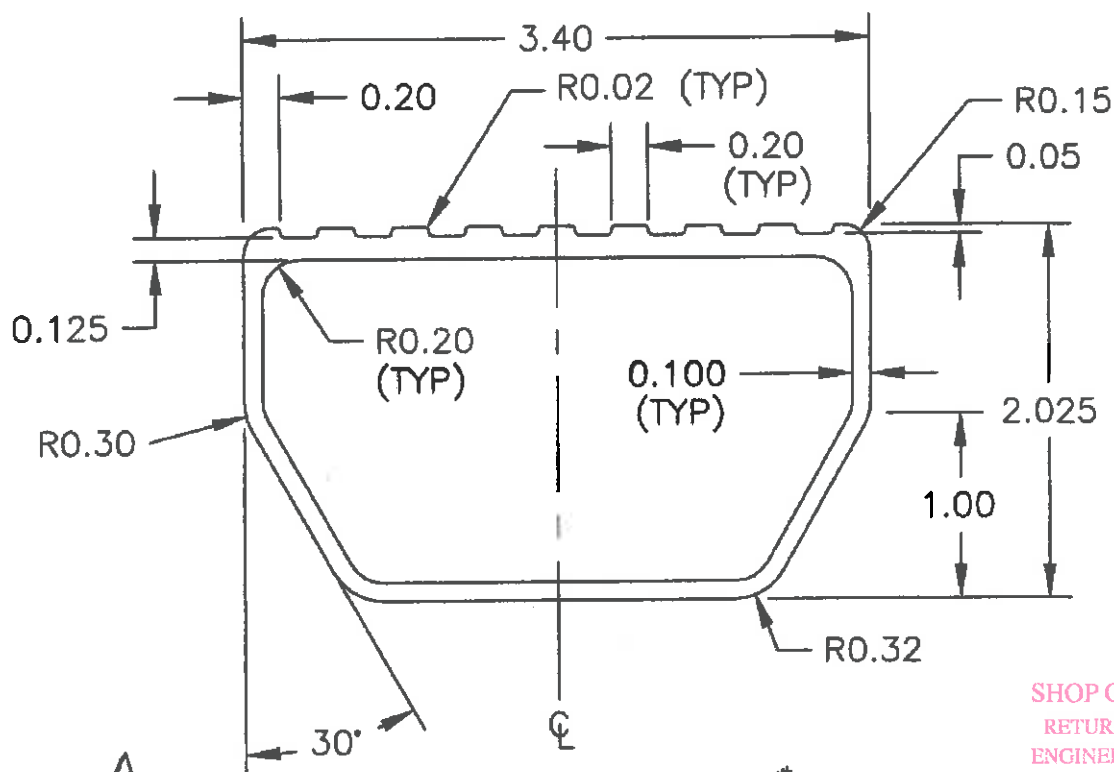
Specifications could not be found.

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DESIGN	DRAWN BY	DART AEROSPACE LTD	
BW	<i>CP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. D
<i>KE</i>	<i>MA</i>	D2244	SHEET 1 OF 1
DATE	TITLE		SCALE
98.11.18	STEP EXTRUSION		1:1
A	94.07.05	NEW ISSUE	
B	94.07.11	REDESIGNED	
C	94.08.08	REDESIGNED	
D	98.11.18	REMOVED 6005A MATERIAL INCORPORATED DEO 9081	
D1	01.04.17	ADDED DIE #	<i># CP</i>

RELEASED
18.11.25 KE



MANUFACTURED USING CARBON INDALEX DIE # MH-18865

PART NUMBER D2244-XX.X
XX.X IS CUT LENGTH IN INCHES

MATERIAL: 6061-T6 (QQ-A-200/8)

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE MINIMUM MECHANICAL PROPERTIES STATED BELOW:

MINIMUM TENSILE YIELD STRENGTH = 35 ksi
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
MINIMUM ELONGATION = 8%

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 195425 MWS
19-05-22

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube Machining ☐ Cross tube ☐ Eng. (Non-AW) ☐ Large Fab ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Finishing ☐ Rec/Store/Packaging ☐ Engineering ☐ Supplier ☐ Quality ☐ Water Jet ☐				MRB (QS1042)					
Date : _____		Sequence #: _____		QTY Affected : _____		MRB (QS1042)							
Description Work Order Deviation						Disposition							
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐						FAULT CATEGORY							
						Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐		Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐		Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐	
						Other/Details: _____							
Completed By						Lead hand / Supervisor							
QC / QA Coordinator													



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043556



Supplier: SAP001-VC
Hydro
c/o M91634, P.O. Box 11634
Succursale Centre Ville
Montreal
QC
H3C 5Y9 Canada
Phone: 877-922-7272
Fax: 800 563 8310

PO No: POHB043556
PO Date: 5/28/19
Due Date: 6/21/19
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

E-MAILED
2019-05-28

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	195425	D2244-116P			Step Extrusion ***EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** ***MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE***	Firmed	-	6/21/19	86 pcs	0 pcs	86 pcs	\$44.476744/pcs	\$3,825.00

Grand Total: \$3,825.00

26-05-19



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
POHB043556



Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Handwritten initials: AM, CL

Plex 5/28/19 9:32 AM Dart.Guerin.Kimberley



Hydro Extrusion Canada, Inc
325, rue Avro
Pointe-Claire Québec H9R 5W3
Téléphone: (514) 697-5120
Télécopieur: (514) 694-8310

Packing Slip / 0170786
Détail de Livraison
Order no / 9051732 1
Commande

Ship to/Expédié à DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ONT		Sold to/Vendu à DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ONT		Special Instr / Instr. Spéciales			
Cust No/No du Client 201355	Cust No/No PO du Client HB043556	PPD/FAYE X	Ord Dte/Dte Comm 19/05/28	Our Ord Dte/ Notre Dte la Comm 19/08/07	Hydro H.S.T #: R857314058		
PST/TPV *6122-5207		Terms/Cond	Date Required/ Date Reçue	Shipped/ Expedi 19/08/23	Shipped Via/ Expédié Par OTTAWA 23 AOUT		
Item No	Ordered Weight Pcs/ Commande Poids Pcs	Hydro Die no/ Matrice d'Saps	Customer Description/ Description de Client	Alloy & Temper/ Alliage et Trempage	Length Longueur	Backorder Wgt Pcs Arrière Poids Pcs	This Shipment Bdls Pcs Com Expédiée Ballots Pcs Poids
1	500 86		DUE=2019/07/04 STEP EXTRUSION MH 18865 D 2244-116P 6061 T6 2946MM BUNDLE= 1420412/1420416 We hereby certify that the material supplied meets the chemical properties as published by the Aluminum Association, and requirements of our Quality procedures				2 60 347 KGS

Aluminum Extrusions - Anodizing - Fabrication - Painting
Profils D'Aluminum - Anodisation - Fabrication - Peinture

The above items were received in good order.
Les articles ci-dessus ont été reçu en bon ordre.

By/Par

HYDRO COPY



Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer: **DART AEROSPACE LTD**
Adresse / Address: **270 ABERDEEN STREET
HAWKESBURY ONT,
K6A 1K7**

commande Hydro / Hydro order #: **9051732**

bon de commande / Purchase order #: **HB043556**

de matrice / Die #: **Mh 18865**

Alliage & trempage / Alloy & temper: **6061 T6** *AT*

Contrôle / Control #: **36395-5**

Coulée / Cast #: **75693**

Description: **STEP EXTRUSION**

Customer Part #: **D2244-116P** *Ar*

Conductivité / Conductivity: **N/A**

Propriétés mécaniques Mechanical Properties	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (ksi)	38.0	42.3
Contrainte élastique Yield stress (ksi)	35.0	35.2
% élongation dans 2" % elongation in 2"	8	11
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	N/A	

Composition chimique Réelle / Real chemical composition :

Alliage	Cast no	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6061 T6	75693	0,46	0,143	0,039	0,03	0,472	0,013	0,005	0,012

Certificat

Hydro Extrusion Canada, Inc. certifie par la présente que le métal expédié sous ce rapport a été testé conformément à la norme ASTM B221-14 identifié et / ou spécifications ASME SB 221-17 et les résultats de l'analyse chimique et les propriétés mécaniques des tests sont dans les plages d'acceptabilité des spécifications. La garantie du produit est régie par Extrusion Amérique du Nord. Les conditions standard des ventes sont affichées sur la page web : www.hydroextrusions.com/termsconditions

Certification

Hydro Extrusion Canada, Inc. hereby certifies that the metal shipped under this report has been tested in accordance with the identified ASTM B221-14 and/or ASME SB 221-17 specifications and the results of the chemical analysis and mechanical properties tests are within the acceptable ranges of these specifications. Any product warranty is governed by the Extrusion North America Standard Terms and Conditions of Sale posted at www.hydroextrusions.com/termsconditions.

Sincèrement vôtre,
Yours truly,

Date : **08-08-2019**

Baharak Sarrafan
Directrice Qualité
Quality Manager

Hydro
Extrusion North America
325 Avro
Pointe-Clair, QC H9R 5W3
Canada

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D2244-116
 DATE: 19/08/30

PO / BATCH NO.: POH8043556/SJ10467

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 60x
 QUANTITY INSPECTED: 60x
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.100"
 THICKNESS RECEIVED: 0.100"
 SHEET SIZE ORDERED: -
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<u>(Y)</u> <u>(N)</u>	<u>Minor scratches that can be buffed out</u>
CORRECT FINISH	<u>(Y)</u> <u>(N)</u>	
CORROSION	<u>(Y)</u> <u>(N)</u>	
CORRECT GRAIN DIRECTION	<u>(Y)</u> <u>(N)</u>	
CORRECT MATERIAL PER M-DRAWING	<u>(Y)</u> <u>(N)</u>	<u>D2244-116P (6061 T6)</u>
CORRECT THICKNESS	<u>(Y)</u> <u>(N)</u>	
PHOTO REQUIRED	<u>(Y)</u> <u>(N)</u>	
CORRECT REF # TO LINK CERT	<u>(Y)</u> <u>(N)</u>	<u>POH8043556</u>
CORRECT MATERIAL IDENTIFICATION	<u>(Y)</u> <u>(N)</u>	
CORRECT M# ON THE MATERIAL	<u>(Y)</u> <u>(N)</u>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<u>(Y)</u> <u>(N)</u>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<u>(Y)</u> <u>(N)</u>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____		
DATE: <u>AUG 30 2019</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in